

SPECIFICATION AMENDMENTS

On page 4, lines 9-14, please amend as follows:

~~"The above referenced description of the summary of the invention captures some, but not all, of the various aspects of the present invention. The claims are directed to some other of the various other embodiments of the subject matter towards which the present invention is directed. In addition, other aspects, advantages and novel features of the invention will become apparent from the following detailed description of the invention when considered in conjunction with the accompanying drawings."~~

The present invention is directed to apparatus and methods of operation that are further described in the following Brief Description of the Several Views of the Drawings, the Detailed Description of the Invention, and the claims. Other features and advantages of the present invention will become apparent from the following detailed description of the invention made with reference to the accompanying drawings."

On page 10, line 18 to page 11, line 2, please amend as follows:

"The CMs of the CM users 111-119 and the CMTS 130 communicate synchronization information to one another to ensure proper alignment of transmission from the CM users 111-119 to the CMTS 130. This is where the synchronization of the SCDMA communication systems is extremely important. When a number of the CMs all transmit their signals at a same time such that these signals are received at the CMTS 130 on the same frequency and at the same time, they must all be able to be properly de-spread and decoded for proper signal processing. The present invention employs PN code spreading, OC code spreading on a transmit side, and then PN code de-spreading, OC code de-spreading on a receive side in its various embodiments."

On page 17, line 17 to page 18, line 17, please amend as follows:

"Then, as shown in a functional block 620, the signal is transmitted via a cable. The signal may degrade as it is transmitted via the cable, including multi-path dispersion 621, and in other cases, it may undergo other signal degradation 622 as

well. The multi-path dispersion 621 may be viewed as being attenuated, delayed versions of the signals transmitted to and from CM users within a CM communication system. After the signal has been transmitted ~~from~~ via the cable, then a functional block 630 performs front-end filtering of the received signal. While performing the front-end filtering of the received signal within the functional block 630, transmitter/receiver mismatch filtering may be performed as shown in a functional block 632. This transmitter/receiver mismatch filtering 632 may be viewed as being any filtering that is operable to remove any residual ISI of a received signal, and to substantially eliminate and/or reduce any imperfections of the filtering performed by the front-end filtering 630, and/or reduce any mismatches between a transmitter and a receiver that are employed according to the present invention. In some embodiments, the transmitter/receiver mismatch filtering 632 is performed by using ingress cancellation filtering (ICFing) as shown in a functional block 631. The use of the transmitter/receiver mismatch filtering 632, and specifically the use of the ICFing 631, are optional. Clearly, the transmitter/receiver mismatch filtering 632 may perform filtering that is different than that of the ICFing 631. The ICFing 631 is operable to reduce, among other things, narrowband interference of the CM spread signal as it travels through the cable. The signal is then demodulated as shown in a functional block 625.

The PN code is then used for de-spreading the signal de-spread as shown in a functional block 635. Afterwards, the OC is then used for de-spreading the signal de-spread as shown in a functional block 640. If desired, then averaging filtering is shown in a functional block 645. Afterwards, hard limiting is performed as shown in a functional block 660 to generate an output signal that is, ideally, a representation of the data that have been provided earlier as the input signal.”

On page 19, lines 1-6, please amend as follows:

“FIG. 7 is a system diagram illustrating an embodiment of a CM 700 that is built in accordance with certain aspects of the present invention. From certain perspectives, the FIG. 7 shows the capabilities of the CM 700 being able to perform OC spreading and PN code spreading. The cable modem 700 includes a transmit

block 701 and a receive block 702. The transmit block 701 and the receive block 702 operate cooperatively to communicate with a CMTS. This communication may be via a CM network segment in certain embodiments.”